

## **REMARKS/ARGUMENTS**

### **1.) Claim Amendments**

The Applicant has amended claims 1, 7, 13, and 18. Applicant respectfully submits no new matter has been added. Accordingly, claims 1-21 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

### **2.) Claim Rejections – 35 U.S.C. § 101**

The Examiner objected to Claims 1-21 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. The Applicant has amended independent claims 1, 7, 13, and 18 to recite statutory subject matter. Claims 2-6 depend from amended claim 1 and recite further limitations in combination with the novel elements of claim 1. Claims 8-12 depend from amended claim 7 and recite further limitations in combination with the novel elements of claim 7. Claims 14-17 depend from amended claim 13 and recite further limitations in combination with the novel elements of claim 13. Claims 19-21 depend from amended claim 18 and recite further limitations in combination with the novel elements of claim 18. Therefore, the allowances of claims 1-21 is respectfully requested.

### **3.) Claim Rejections – 35 U.S.C. § 102(a)**

Claims 1, 4, 6, 7, 10, 12-15, 17-19 and 21 stand rejected under 35 U.S.C. 102(b) as being anticipated by Cotanis ("Impacting Factors on the Objective Measurement Algorithms for Speech Quality Assessment on Mobile Networks"). The Applicant respectfully traverses the claim rejections.

It is important to remember that anticipation requires that the disclosure of a single piece of prior art reveals every element, or limitation, of a claimed invention. Furthermore, the limitation that must be met by an anticipatory reference are those set forth in each statement of function in a claims limitation, and such a limitation cannot be met by an element in a reference that performs a different function, even thou it may be

part of a device embodying the same general overall concept. Cotanis fails to anticipate each and every limitation of claim 1. Therefore, claim 1 is not anticipated.

The Applicant's claimed invention provides a processing unit and method that is capable of estimating a quality of a speech signal transmitted through a wireless network. The present invention utilizes a logistic function having the form:

$$y = 1 + 4/(1 + \exp(-1.7244 * x + 5.0187)).$$

In contrast to the Applicant's claimed invention, Cotanis utilizes a logistic function defined by:

$y = 1/(1 + \exp(c*x+d))$ . The Examiner stated that the logistic function disclosed in Cotanis is a more general form of the equation recited in claim 1. The Applicant respectfully disagrees with this characterization. As discussed in the Applicant's specification, there have been many attempts at developing mapping functions to map a PESQ score to the MOS domain. However, these mapping functions do not work well in accomplishing the mapping function. Thus, the present invention has been developed to provide a fair more accurate and useable logistic function than previously used. Clearly equation (1) disclosed in Cotanis is significantly different than the logistic function recited in claim 1. Cotanis is not a generalized equation of the logistic function recited in claim 1. Even if  $c$  is replaced with  $-1.7244$  and  $d$  is replaced with  $5.0187$ , any number inputted into  $x$  would result in a significantly different  $y$  result. In addition, Cotanis does not disclose using  $-1.7244$  or  $5.0187$  as values in the logistic function.

Thus, not every element of claim 1 is disclosed in Cotanis. Independent claims 7, 13, and 18 contain limitations analogous to claim 1. Therefore the allowance of claims 1, 4, 6, 7, 10, 12-15, 17-19 and 21 is respectfully requested.

#### **4.) Claim Rejections – 35 U.S.C. § 103 (a)**

Claims 2, 5, 8, 11, 16 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cotanis ("Impacting Factors on the Objective Measurement Algorithms for Speech Quality Assessment on Mobile Networks") in view of Rix (ITU-T SG12, D.86). The Applicant respectfully traverses the rejection.

As discussed above, Cotanis does not disclose the logistic function as recited in independent claims 1, 7, 13, and 18. The addition of Rix does not make up the missing elements of Cotanis. Claims 2 and 5 depend from amended claim 1 and recite further limitations in combination with the novel elements of claim 1. Claims 8 and 11 depend from amended claim 7 and recite further limitations in combination with the novel elements of claim 7. Claim 16 depends from amended claim 13 and recites further limitations in combination with the novel elements of claim 13. Claim 20 depends from amended claim 18 and recites further limitations in combination with the novel elements of claim 18. Therefore, the allowance of claims 2, 5, 8, 11, 16 and 20 is respectfully requested.

Claims 3 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cotanis ("Impacting Factors on the Objective Measurement Algorithms for Speech Quality Assessment on Mobile Networks") in view of Graphpad ("How Non Linear Regression Works"). The Applicant respectfully traverses the rejection.

Cotanis does not teach or suggest the logistic function of claims 1 or 7. Cotanis merely discloses a logistic function significantly different than the Applicant's claimed invention. The addition of Graphpad does not make up the missing elements of Cotanis. Claim 3 depends from amended claim 1 and recites further limitations in combination with the novel elements of claim 1. Claim 9 depends from amended claim 7 and recites further limitations in combination with the novel elements of claim 7. Therefore, the allowance of claims 3 and 9 is respectfully requested.

#### **5.) Prior Art Not Relied Upon**

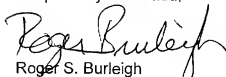
In paragraph 30 on page 12 of the Office Action, the Examiner stated that the prior art made of record and not relied upon is considered pertinent to the Applicant's disclosure.

**CONCLUSION**

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

  
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